AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (currently amended): An implantable device comprising:

a reticulated ~~resiliently compressible~~ elastomeric matrix, formed by a reticulation process comprising combustion or chemical reticulation, said elastomeric matrix comprising a material selected from the group consisting of:

(i) polyurethane,

(ii) poly(urea-urethane),

(iii) polycarbonate polyurethane,

(iv) polycarbonate poly(urea-urethane),

(v) any polymer formed by the reaction of an isocyanate with a polyol selected from the group consisting of a polycarbonate polyol, a polysiloxane polyol, a hydrocarbon polyol, or any combination thereof; and

(vi) any combination thereof;

wherein said elastomeric matrix has an isocyanate index of about 0.9 to about 1.029 and is substantially free of allophanate, biuret and isocyanurate linkages.

Claim 2 (original): The implantable device of claim 1, wherein the implantable device is biodurable for at least 29 days.

Claim 3 (currently amended): The implantable device of claim 1, wherein the reticulated elastomeric matrix comprises a polycarbonate polyurethane, a polycarbonate polyurethane-urea, or any mixture thereof.

Claim 4 (original): The implantable device of claim 3, wherein the implantable device is biodurable for at least 6 months.

Claim 5 (currently amended): The implantable device of claim 1, wherein the ~~comprising a~~ reticulated elastomeric matrix ~~comprising~~ comprises a plurality of pores, the pores having an average diameter or other largest transverse dimension of at least about 100 μm.

Claim 6 (original): The implantable device of claim 3, wherein the pores have an average diameter or other largest transverse dimension of from greater than 250 μm to about 900 μm.

Claim 7 (currently amended): The implantable device of claim 1, wherein the ~~comprising a~~ reticulated elastomeric matrix ~~comprising~~ comprises a plurality of pores, the pores having an average diameter or other largest transverse dimension of from about 275 μm to about 900 μm.

Claim 8 (currently amended): The implantable device of claim 1, wherein the ~~comprising a~~ reticulated elastomeric matrix ~~comprising~~ comprises a plurality of pores, the pores having an average diameter or other largest transverse dimension of from greater than 300 μm to about 700 μm.

Claim 9 (currently amended): The implantable device of claim 1, ~~comprising a resiliently compressible elastomeric matrix such that the implantable device,~~ wherein said reticulated elastomeric matrix is resiliently compressible such that when compressed from a relaxed configuration to a first, compact configuration for delivery via a delivery-device, expands to a second, working configuration, *in vitro,* at least about 50%, ~~optionally at least about 80%,~~ of the size of the relaxed configuration in at least one dimension.

Claim 10 (currently amended): The implantable device of claim 9, wherein ~~the recovery properties of the elastomeric matrix are such that a dimension of the second, working configuration is within about 50% of a relaxed dimension of the relaxed configuration after compression to from about 90% to about 10% of the relaxed dimension and wherein~~ the reticulated elastomeric matrix has a compressive strength at 50% compression of from about 1 psi (about 700 kg/m^2) to about 200 psi (about 140,000 kg/m^2), ~~a tensile strength of from about 1 psi (about 700 kg/m^2) to about 75 psi (about 52,500 kg/m^2)~~ and an ultimate tensile elongation of at least about 76%.

Claim 11 (currently amended): The implantable device of claim 1, wherein the reticulated elastomeric matrix has a density from about 0.005 g/cc to about 0.15 g/cc (from about 0.31 lb/ft^3 to about 9.4 lb/ft^3) ~~compression set after 22 hours compression at about 25°C to 50% of its thickness in one dimension of not more than about 30%, optionally not more than about 10%~~.

Claim 12 (currently amended): The implantable device of claim 1, wherein ~~the elastomeric matrix comprises polycarbonate, polysiloxane, polyurethane, hydrocarbon, copolymers thereof, or any mixture thereof.~~ the reticulated elastmeric matrix has a tensile strength of from about 1 psi (about 700 kg/m^2) to about 75 psi (about 52,500 kg/m^2).

Claim 13 (previously presented): The implantable device of claim 1, wherein the reticulated elastomeric matrix is configured to permit cellular ingrowth and proliferation into the reticulated elastomeric matrix.

Claims 14-49 (canceled).

Claim 50 (currently amended): The implantable device of claim 11, wherein the reticulated elastomeric matrix has a compression set after 22 hours compression at about 25°C to 50% of its thickness in one dimension of not more than about 5%.

Claim 51 (canceled).

Claim 52 (currently amended): The process of claim [[5]]1, wherein the average number of isocyanate groups per molecule in the isocyanate ~~component~~ is greater than 2.

Claim 53 (currently amended): The process of claim 52, wherein the average number of isocyanate groups per molecule in the isocyanate ~~component~~ is greater than about 2.2.

Claim 54 (previously presented): The implantable device of claim 1, wherein the implantable device substantially fills the biological site in which it resides.

Claim 55 (currently amended): The implantable device of claim 1[[3]], wherein the reticulated elastomeric matrix is integrated into the tissue being repaired or replaced.

Claims 56-114 (canceled).

Claim 115 (new): The implantable device of claim 1, wherein said implantable device is suitably dimensioned for implantation into an anatomical site.

Claim 116 (new): The implantable device of claim 11, wherein the reticulated elastomeric matrix has a compression set after 22 hours compression at about 25°C to 50% of its thickness in one dimension of not more than about 10%.

Claim 117 (new): The implantable device of claim 1, wherein the reticulated elastomeric matrix comprises any polymer formed by the reaction of diphenylmethane diisocyanate with a polyol selected from the group consisting of a polycarbonate polyol, a polysiloxane polyol, a hydrocarbon polyol, or any combination thereof.

Claim 118 (new): The implantable device of claim 117, wherein the diphenylmethane diisocyanate comprises 2,4'-diphenylmethane diisocyanate and 4,4'-diphenylmethane diisocyanate.

Claim 119 (new): The implantable device of claim 118 wherein the diphenylmethane diisocyanate is a mixture of at least about 5% by weight of 2,4'-diphenylmethane diisocyanate with the balance mainly 4,4'-diphenylmethane diisocyanate.

Claim 120 (new): The implantable device of claim 1, wherein the reticulated elastomeric matrix comprises any polymer formed by the reaction of an aliphatic diisocyanate with a polyol selected from the group consisting of a polycarbonate polyol, a polysiloxane polyol, a hydrocarbon polyol, or any combination thereof.

Claim 121 (new): The implantable device of claim 120, wherein the aliphatic diisocyanate is selected from the group consisting of tetramethylene diisocyanate, cyclohexane-1,2-diisocyanate, cycloehexane-1,4-diisocyanate, hexamethylene diisocyanate, isophorone diisocyanate, methylene-bis-(p-cyclohexyl isocyanate), or any combination thereof.

Claim 122 (new): The implantable device of claim 1, wherein the reticulated elastomeric matrix comprises a polymer formed by the reaction of an isocyanate with a polysiloxane polyol or a hydrocarbon polyol, alone or in combination with a polyether polyol.